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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,287	03/31/2006	Alain Bouvier	288319US2PCT	5514

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EXAMINER

DOUGHERTY, SEAN PATRICK

ART UNIT	PAPER NUMBER
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3736

NOTIFICATION DATE	DELIVERY MODE
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03/02/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<i>Office Action Summary</i>	Application No.	Applicant(s)	
	10/574,287	BOUVIER ET AL.	
	Examiner	Art Unit	
	SEAN P. DOUGHERTY	3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the initial Office action after RCE based on the 10/574287 application filed 03/31/2006. Claims 12-28 are currently pending and have been considered below.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/2008 has been entered.

Response to Amendment

Examiner acknowledges amended claim 12 and new claims 24-28 in the documents filed 12/18/2008.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 positively recites limitations that overlap statutory classes. In this case, the applicant has positively recited a method

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and an apparatus in the same claim. See MPEP 2173.05(p) II. Applicant appears to recite a method step of using the instants of impact taken into account using an accelerometer on a second shoe, i.e. "wherein the instants of impact are taken into account for calibrating in time a dynamic measurement of a distance between shoes" alongside the claimed apparatus.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12- 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if Applicant has recited a method step in claim 1. "Wherein the instants of impact are taken into account for calibrating in time a dynamic measurement of a distance between shoes" renders the claim indefinite because it is unclear if the recited step is a method step or if the apparatus is only required to be capable of performing such a step.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 12, 14-16, 18 and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-2003-337930, in view of US Publication No. 2007/0111753 to Vock et al. (Vock).

Regarding claims 12, 14 and 23, JP-2003-337930 discloses a stride monitoring device, comprising a first shoe including at least a permanent magnetic mass (magnet [1]) and a second shoe including at least one magnetometer (magnetometric sensor [2]) for measuring a magnetic field produced by the magnetic mass in the first shoe and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe, where said magnetic field signals can be processed to determine stride parameters (see p.[0002] of English translation).

Note that second shoe including at least one magnetometer of JP-2003-337930 is capable of measuring a magnetic field produced by the magnetic mass in the first shoe and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe.

JP-2003-337930 does not appear to disclose a stride monitoring device where a second shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration, where the acceleration signals outputted by the accelerometer enable determining instants of impact of said second shoe. However, Vock is a reference in analogous art that teaches a second shoe that comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the

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measured acceleration [524]. Note that the accelerometer of Vock is capable of determining instants of impact of said second shoe.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of JP-2003-337930 and Vock before him or her to modify the second shoe of JP-2003-337930 to include the at least one accelerometer of Vock. The motivation for doing so would have been to detect the forward acceleration and speed of a user using the accelerometer located on a shoe (see Vock, p.[0302]).

With regard the statement of intended use and other functional statements, including “wherein the instants of impact are taken into account for calibrating in time a dynamic measurement of a distance between shoes”, they do not impose any structural limitations on the claims distinguishable over of JP-2003-337930 and Vock which is capable of being used as claimed if one so desires to do so. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference “teach” what the subject patent teaches, but rather it is only necessary that the claims under attack “read on” something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claims 15 and 16, JP-2003-337930 discloses the magnetometer and Vock teaches the accelerometer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the assembly of JP-2003-

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344094 in view of Vock to have a plurality of magnetometers and accelerometers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 18, JP-2003-337930 portable means for receiving the signal transmitted by the transmission means and for displaying data representative of the signal (display means [5]).

Regarding claim 24, JP-2003-337930 discloses processing means for determining instants of impact of the second shoe ("personal computer and a personal digital assistant" see JP-2003-337930, p.[0010]).

Regarding claim 25, JP-2003-337930 discloses calibration means for performing a calibration and for determining instants at which the magnetic field signals are to be possessed ("memory means" p.[0008]).

Regarding claim 27, JP-2003-337930 does not expressly disclose where the calibration means perform said calibration on said acceleration signals outputted by said accelerometer. However, Vock is a reference in analogous art that discloses where the calibration means perform said calibration on said acceleration signals outputted by said accelerometer (see p.[296]). One having ordinary skill in the art at the time the invention was made would have found it obvious to provide the device of JP-2003-337930 with the calibration of Vock since the calibration "adjusts for the gait of the runner in orienting the accelerometer relative to ground" (Vock, see p.[0296]).

Regarding claim 28, JP-2003-337930 discloses calculating time and stride rate based on time differences (see claim 5 of JP-2003-337930).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-2003-337930, as applied to claim 12 above, in view of US Patent No. 7,188,439 to DiBenedetto et al. (DiBenedetto).

Regarding claim 13, JP-2003-337930 does not appear to disclose wherein each of the first and second shoes includes at least one magnetic mass, measurement means for making at least one physical measurement, and electronic means for processing the physical measurements, the measurement means including at least one accelerometer and at least one magnetometers capable of outputting signals that can be processed to determine stride parameters. However, DiBenedetto, a reference in analogous art teaches wherein each of the first and second shoes includes (col. 5, lines 55-58) at least one magnetic mass [123], measurement means for making at least one physical measurement [122], and electronic means for processing the physical measurements (electrical circuitry; see Fig. 9-14), the measurement means including at least one magnetometers [122] capable of outputting signals that can be processed to determine stride parameters. Vock teaches measurement means including at least one accelerometer [524] capable outputting signals that can be processed to determine stride parameters.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of JP-2003-337930 and DiBenedetto before him or her to modify the shoes of JP-2003-337930 of each include the magnetic mass, magnetometer and electronic means of DiBenedetto. The motivation for doing so would

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have been to provide the devices of JP-2003-337930 each together on a single shoe and to "measure a magnetic field generated by the magnet ... and convert[ing] the magnetic field measurement into a distance measurement" (DiBenedetto: col. 4, lines 27-29).

Claims 12-24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiBenedetto et al. (US Patent No. 7,188,439), herein referred to as DiBenedetto, in view of Vock et al. (US Publication No. 2007/0111753), herein referred to as Vock.

Regarding claims 12, 14, 17 and 23, DiBenedetto discloses a stride monitoring device, comprising a first shoe including at least a permanent magnetic mass [123], a second shoe including at least one magnetometer for measuring a magnetic field produced by the magnetic mass in the first shoe and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe [122], wherein said magnetic field signals can be produced to determine stride parameters wherein the second shoe comprises electronic means for processing said magnetic field signals (electrical circuitry; see Fig. 9-14), wherein said electronic means comprises means for transmitting a signal output by the electronic means (col. 10, lines 50-61).

Note that second shoe including at least one magnetometer of DiBenedetto is capable of measuring a magnetic field produced by the magnetic mass in the first shoe

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and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe.

DiBenedetto does not appear to disclose a stride monitoring device wherein the second shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration, where the second shoe comprises electronic means for processing said acceleration signals, wherein said electronic means comprises means for transmitting a signal output by the electronic means and where the acceleration signals outputted by the accelerometer enable determining instants of impact of said second shoe. Note that the accelerometer of DiBenedetto is capable of determining instants of impact of said second shoe. However, Vock, a reference in analogous art, teaches wherein the second shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration [524] wherein the second shoe comprises electronic means for processing said acceleration signals, wherein said electronic means comprises means for transmitting a signal output by the electronic means ("MMD 524 wirelessly transmits speed as wireless data 527 to wrist instrument 526"; ¶0302).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of DiBenedetto and Vock before him or her to modify the second shoe and electronic means of DiBenedetto to include the at least one accelerometer and electronic means of Vock. The motivation for doing so would have

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been to detect the forward acceleration and speed of a user using the accelerometer located on a shoe (Vock: ¶0302).

With regard the statement of intended use and other functional statements, including “wherein the instants of impact are taken into account for calibrating in time a dynamic measurement of a distance between shoes”, they do not impose any structural limitations on the claims distinguishable over of JP-2003-337930 and Vock which is capable of being used as claimed if one so desires to do so. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference “teach” what the subject patent teaches, but rather it is only necessary that the claims under attack “read on” something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Regarding claim 13, DiBenedetto discloses where each of the first and second shoes includes (col. 5, lines 55-58) at least one magnetic mass [123], measurement means for making at least one physical measurement [122], and electronic means for processing the physical measurement (electrical circuitry; see Fig. 9-14), the measurement means including at least one magnetometer [122] capable of outputting signals that can be processed to determine stride parameters. Vock teaches measurement means including at least one accelerometer [524] capable outputting signals that can be processed to determine stride parameters.

Regarding claim 15, DiBenedetto does not appear to disclose wherein a second shoe comprises a plurality of accelerometers. However, Vock, a reference in analogous art, teaches wherein a second shoe comprises a plurality of accelerometers (“Additional accelerometers in MMD 524” ¶0302).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of DiBenedetto and Vock before him or her to modify the second shoe of DiBenedetto to include the plurality of accelerometers of Vock. The motivation for doing so would have been to detect the forward acceleration and speed of a user using the accelerometer located on a second shoe (Vock: ¶0302) and “to provide improved speed accuracy to runner” (Vock: ¶0302).

Regarding claim 16, DiBenedetto discloses the claimed invention except for wherein the second shoe includes a plurality of magnetometers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the assembly of DiBenedetto having a plurality of magnetometers, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 18, DiBenedetto discloses portable means for receiving the signal transmitted by the transmission means and for displaying data representative of the signal (“the data can be transmitted (e.g., via radio waves) to a device with a display panel located with the user ... the data can be transmitted to a wristwatch or other device being worn the user” col. 10, lines 54-57).

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Regarding claim 19, DiBenedetto where the portable means comprises a data reception means, electronic data processing means for processing data, control input means and display means ("the user may adjust certain characteristics of the shoe by pressing buttons on the wristwatch" col. 10, lines 58-59; "the data can be transmitted (e.g., via radio waves) to a device with a display panel located with the user ... the data can be transmitted to a wristwatch or other device being worn the user" col. 10, lines 54-57). DiBenedetto discloses the claimed invention except for wherein the electronic processing means includes a memory. One of ordinary skill in the art at the time of the invention would have recognized that the wristwatch of DiBenedetto would contain a memory since memories in electronic devices are necessary for the device to function and well know to those in the art.

Regarding claims 20 and 22, DiBenedetto where the memory includes a sequence to calibrate the signal transmitted by the transmission means, as a function of stride length and magnetic characteristics of the shoes ("In addition, the time of the flight phase (described above) can contribute to the determination of the optimum setting. The stride frequency of the user can be calculated from this variable" col. 13, lines 18-21), a stride length estimating algorithm that uses a measurement of a variation in magnetic field resulting from movement of the magnetic mass ("The system can be calibrated, such that this magnetic field strength can be converted to a distance" col. 7, lines 66-67), an algorithm to calibrate the signal transmitted by the transmission means as a function of the parameters input by a user ("The user can set the compression range or other performance characteristic target value of the article of footwear 100, by

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pushing input button 502 to increase the target value or pushing input button 504 to decrease the target value or range" col. 9, line 64 to col. 10, line 1), and an algorithm to estimate the stride speed ("In turn, stride frequency can be used to determine changes in speed and to differentiate between uphill and downhill motion" col. 13, lines 21-24).

Regarding claim 21, DiBenedetto discloses where the calibration sequence is designed to determine a mathematical calibration law by polynomial regression, and to determine a direct correspondence between the measured signal and the stride length, for given shoes and a given individual ("The stride frequency of the user can be calculated from this variable" col. 13, lines 19-21; ("In turn, stride frequency can be used to determine changes in speed and to differentiate between uphill and downhill motion" col. 13, lines 21-24). DiBenedetto discloses the claimed invention, including various calculated variables, except for polynomial regression. One of ordinary skill in the art would find it obvious that a mathematical calibration law by polynomial regression could be used since such mathematical equations or old and well known to those in the art.

Regarding claim 24, DiBenedetto discloses processing means for determining instants of impact of the second shoe ("The system 106 may also include an interface port 160 that can be used to download data from the intelligent system 106, for example to a PDA or other external processor" col. 13, lines 52-55).

Regarding claim 27, DiBenedetto does not expressly disclose where the calibration means perform said calibration on said acceleration signals outputted by said accelerometer. However, Vock is a reference in analogous art that discloses where the calibration means perform said calibration on said acceleration signals outputted by said

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accelerometer (see p.[296]). One having ordinary skill in the art at the time the invention was made would have found it obvious to provide the device of DiBenedetto with the calibration of Vock since the calibration "adjusts for the gait of the runner in orienting the accelerometer relative to ground" (Vock, see p.[0296]).

Regarding claim 28, DiBenedetto discloses calculating time and stride rate based on time differences (col. 5, lines 13-18).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN P. DOUGHERTY whose telephone number is (571)270-5044. The examiner can normally be reached on Monday-Friday, 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean P. Dougherty/
Examiner, Art Unit 3736

/Max Hindenburg/
Supervisory Patent Examiner, Art Unit 3736